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Garden Magazine
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February-March, 1962
Vol. 53, No. 1

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The city gardener, accustomed to well-marked streets and square, 100 foot blocks, may find himself lost if he takes a day off to wander the back roads and shady lanes of the North County communities featured in this issue. But what a place to be lost in!

Apparently a publication about growing things touches North County residents where they live, for they have shown a warm enthusiasm for this magazine. The list of regular contributors from the area is impressive in itself. From Encinitas, Dorothy S. Behrends, ace reporter and begonian, and Donald Betts, whose Nature's Nook articles are delighting readers in every issue. From Carlsbad, Edith P. Healey, who has written on Birds-of-Paradise, macadamias and Silver Trees. From Oceanside, Florence A. Pierce, the herb lady. From Vista, Thos. L. Hosmer, the prolific geranium expert, and James Cauffield, an active nurseryman who takes time out to give you timely advice on garden chores.

It follows, too, that the County's first botanical garden, Quail Park, should evolve in the North County area. First, the space is there, but more important still, the spirit is there. Smaller concentrations of population generally mean that people are individuals and not merely ciphers. And individuals get things done. Speaking of individuals, I am grateful to Myrtle Broam, of the Carlsbad Chamber of Commerce, and to Maxine Brown, of the Encinitas Chamber, for help in assembling material for this issue.

* * *

"The Billboard Game," as *San Diego Magazine* called it in a trenchant article last December, goes on. A revised (and presumably strengthened) ordinance will go before the city Planning Commission for public hearing on February 7th. If this ordinance proves acceptable to the Commission, it will face the major hurdle of the City Council. The Council will find itself under extreme pressure to restrict sign boards on freeways as little as possible. Moreover, several Councilmen have expressed themselves as favoring the least possible, the so-called "minimum ordinance." which would qualify San Diego for freeway landscaping under the requirements of the State Division of Highways; presumably they will have little inclination to resist the pressure.

The "least possible" has proved unsatisfactory elsewhere. San Francisco passed a minimum ordinance several years ago, and is now trying to revise it upward to clear away the jungle of signs at awkward places along approaches to the city. Billboards, like prices, go up much faster than they come down. We should have a good ordinance the first time around, and we can have, as indicated by the Planning Commission's rejection of the minimum draft, but we will have to continue to work for it.

The real point is that it isn't too late to make yourself heard. Letters are counted just like votes at these hearings. As individuals, and as clubs, you can phone, write, buttonhole your Councilman, harangue your neighbors, congratulate the Planning Commission, and stomp down to Civic Center.

* * *

The approach of Arbor Day, March 7, and California Conservation Week, March 7-14, gives us an opportunity to search our collective consciences to see if we are doing our share. Here are a few suggested lines of action:

1. Plant a tree, either on your own property, or on adjoining land.

2. Inspire your neighbors to do likewise.

3. As a member of a group, consider planting a tree in one of the memorial groves available in City and County Parks. Consider making this tree a memorial to a distinguished *living* person, the immediate past president of your group, perhaps, thereby establishing a useful precedent.

4. Save an existing tree, either on your own property or on nearby land. Many old trees are slowly dying, unnoticed, from lack of water during these years of low rainfall. Examine your own trees and those in your neighborhood. Drought-stricken trees need deep watering; put a soil-soaker around the drip line, and let the water run slowly for 24 hours or more.

The California Conservation Council, 912 Santa Barbara Street, Santa Barbara, will help you with printed material and suggestions for Arbor Day and Conservation Week programs.

George A. La Pointe

CALIFORNIA GARDEN

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Photograph by Thos. L. Crist.

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Editor.....George A. La Pointe
Assistant editor.....Alice M. Greer
Advertising.....Margaret K. La Pointe
Joan Betts, Alice M. Clark, Eleanor Gesell
Photography.....Thos. L. Crist
Office manager.....Mary M. Wright

CONTRIBUTING STAFF

Dorothy S. Behrends — Marion Almy Lippitt
Helen D. Carswell — Jane Minshall
Alice W. Heyneman — W. Allen Perry
Ethel Bailey Higgins — Frank Quintana
Roland S. Hoyt — Ed F. Roach
Chauncy I. Jerabek — David R. Roberts

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Lloyd Lowrey

HE CULTIVATES A LARGE GARDEN

By Jean Morley

SAN Diego can achieve the finest park system in the country—if the citizens work together towards that end. So thinks Park Superintendent Lloyd Lowrey as he nears his second anniversary on the job.

With pleasure, he looks back on the accomplishments of the past year: landscaping of North Clairemont Park and two areas in Mission Bay, landscaping around new community centers (Highland-Landis and Allied Gardens) and branch libraries (Mission Hills and Valencia Park), completing several renovation projects in Balboa and Presidio Parks, and the beginning of tree-trimming in San Diego's first natural park in San Clemente Canyon. Programmed for the coming year are tree-planting on major streets, completion of landscaping in Kate O. Sessions and South Crest Parks, development of Cabrillo Heights Park, and starting the city's third nursery.

As park superintendent, Mr. Lowrey works under the Director of Parks and Recreation, Mr. Lester E. Earnest. His responsibilities include development and improvement of park and recreation areas, erosion control and beautification of major streets, supervision of nurseries, advising on design of parks, and administering a staff of 200 employees (nurserymen, tree trimmers, gardeners, and equipment operators).

What are some of the problems, or challenges, facing a park superintendent in San Diego?

First, the current renovation job is large because for many years funds were not available for adequate maintenance. If we had thinned trees and shrubs years ago (when labor costs were lower), our expenses would have been less and our remaining trees would be stronger. If we had converted to automatic watering systems long ago, the installation costs would have been lower and the gardeners could have been weeding and pruning instead of standing around with a hose.

Another problem is the soil, poor and shallow, which does not nourish and support plants adequately, nor does it provide good drainage. Under Mr. Lowrey a soil-building program has been started; in a few years the city is expected to have soil "made" from tree-trimming chips, sewerage sludge, and clay clods (all watered down and composted).

A third problem is the high cost of water. Better soil and mechanization of watering will save money by making water go farther.

Besides catching up on back work, Mr. Lowrey looks forward to helping develop new parks. San Diego has over 7000 acres of park land, of which approximately 2500 are actually developed.

An exciting new task is the city tree-planting program. This well-organized operation will bring not only beauty but variety to our major streets. Palms and peppers (traditional here) will be supplemented by *Cupania anacardioides* (similar to weeping eucalyptus), *Agonis flexuosa* (pendulous green branches with coppery twigs), flame eucalyptus, "Autumn Gold" ginkgo, jacarandas (lavender flower clusters), *Koelreuteria bipinnata* (red pods), liquidambar (red foliage in fall), and Canary Island and Monterey Pines. The new 200-acre nursery at 54th and Lyon Road, near Chollas Heights, which will be started in early spring, will be devoted to growing trees for the street tree program, and to experimentation with low maintenance plants.

In San Diego there is less than one-quarter tree per person, while Modesto has almost one tree for every member of the population. This statistic may inspire groups to take advantage of the opportunity provided by the memorial-tree groves in city parks. Mr. Lowrey points out that in selected areas of Balboa Park, for example, citizen groups may plant trees to honor persons they select.

Have you looked over a new park in your neighborhood, or taken a careful walk in one of San Diego's major parks recently? When you do, watch for the changes. You will probably find automatic watering systems, trimmed and thinned trees, a reduction in shrubbery balanced by increased lawn areas. Mr. Lowrey explains that areas of shrubbery cannot be "used" the way lawns can. Trees and shrubs serve in a different way: as blankets for noise, to create visual blocks or to give variety to vistas. In addition to being more "useful" than shrubs, lawns are easier to maintain.

Mr. Lowrey directs the various activities of his department from a small but pleasant office in Balboa Park. There, on his bookcase, is his "chamber of horrors," a collection of cross-sections from a tree that was cut down because it was hazardous. Pick up a cross-section. Notice how healthy the tree appeared on the outside. But put your finger on the core (which held the tree erect) and find how spongy it is. This tree came down in time! One of a park superintendent's responsibilities is to insure that the public is not exposed to the hazard of falling trees. Knowing that, Mr. Lowrey's term for his collection seems very apt.

WHY does a man choose a career in park work? As a post-war student of architecture at the University of California at Berkeley, Lloyd Lowrey was required in one course to plan a park. The project proved so absorbing that he switched his major to landscape architecture. The interest and enthusiasm which caused him to make that change are still with him.

Following his university training, he was successively a landscape architect for the Blue Ridge Parkway National Park (Virginia), assistant superintendent of parks in San Mateo, and director of parks and recreation in Modesto.

His experience with the National Park Service is proving useful in San Diego in developing natural parks such as San Clemente Canyon (see CALIFORNIA GARDEN, August-September, 1961) and Mission Gorge (see booklet by San Diego City Planning Department, Nov. 1960, Proposed Fortuna Mt.-Mission Gorge Metropolitan Park). In preliminary plans for San Clemente Canyon, for example, Mr. Lowrey recommends small parking areas to help distribute human use (and lessen harm to vegetation), minimal facilities (to lower original and upkeep costs), and planting related to, or supporting, the unique native growth.

He believes that "No other municipal area in our country has an opportunity for wise use of open space comparable to San Diego's." As examples of "open space," think of famous San Diego vistas: the formerly unobstructed views of Mission Bay and San Diego Bay, the sweep of lawns in Balboa and Presidio Parks, or the wide, tree-lined residential streets in older parts of the city, such as Elliott on Point Loma. Think also of yet-to-be-developed park lands and of the picturesque canyons so characteristic of our city.

How can we, as intelligent citizens, influence their future?

First, we can inform ourselves. This we can do by visiting our parks, by taking advantage of the tours and speakers offered to groups by the park department, by studying the capital outlay plan (Capital Improvements Program 1961-2 #66-7 S. D. City Planning Dept., Sept. 1961, available in city library), and by asking questions of responsible officials. Mr. Lowrey emphasizes the need for continuity in our interest in park development: things change and sporadic activity is not really effective support. Rather than becoming aroused only when a park is "threatened" or opposing a park proposal when made, the effective citizen will keep up with the problems of park operation and acquire an understanding of present conditions and long-range plans.

Second, we can act. Note that this follows, not precedes, informing ourselves. Action takes many forms. We can support city planners, the park superintendent, and organizations and individuals working toward the ends we seek. This may mean attending hearings, voicing our views based on study, letting officials, Councilmen and neighbors know wherein our interest lies. As Mr. Lowrey sees it, citizens informed on park matters must be "willing and able to generate interest in others." Action also means voting support of issues and men that are geared toward proper park development. And it means paying taxes.

Another important citizen responsibility is to develop an understanding of park philosophy. In this connection Mr. Lowrey has several suggestions. "Recognize the limitless advantages of open space for recreational use to the residents of any metropolitan area. Be aware that the benefits to be derived from such areas are intangible and can't be measured in dollars and cents; they possess attributes of moral and physical well-being which are as essential to the health and welfare of citizenry as are adequate streets or police and fire protection. Understand that parks are not inanimate structures, but living elements having requirements (just as humans do) that must be met."

We can follow the simple steps above and work together toward the finest park system in the country. As Lloyd Lowrey sees it, the finest is the only kind of park system worthy of this city's unique setting and natural beauty.

50 YEARS AGO
in CALIFORNIA GARDEN

Kate O. Sessions, February, 1912—The charm of building outside of the city is the opportunity to select a location where nature has added a choice ledge of rock or outcropping of hardpan.

March, 1912—A sane understanding of the principles of irrigation must be had for economical use of water, and strange as it may seem, the first requisite is to use enough when you use any.

Did you miss the 10-page spread on Presidio Park in the June-July issue of CALIFORNIA GARDEN? In a guided "plant tour," Chauncy Jerabek locates and describes 101 trees and shrubs; Alice Clark's playful map of the Park is keyed to the text for easy touring, whether in your armchair or on the ground.

This issue is available again at the Gift Shop in Serra Museum at Presidio Park. Pick up a copy soon.

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Chairman: Mrs. Theresa Bustamente

AFFILIATE MEMBERS, 1962

ALFRED D. ROBINSON BEGONIA SOCIETY
Third Friday, Homes of Members, 10 a.m.
President: Mrs. Clayton Lee
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Rep. Dir.: Mrs. Anuta Lynch CY 8-1400

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Third Saturday, Floral Building, 10 a.m.
President & Rep. Dir.: James Saraceno
3366 Lloyd St., S.D. 17 BR 4-2628

CONVAIR GARDEN CLUB—
Second Wednesday, Floral Building, 7:30 p.m.
President: Henry Boyd
6581 Broadway, S.D. 14 CO 4-1283
Rep. Dir.: Eugene Zimmerman BR 7-3383

MISSION GARDEN CLUB OF SAN DIEGO
First Monday, Floral Bldg., 7:30 p.m.
President: Dr. R. J. McBride
2828 Dove, S.D. 3 CY 5-1127
Rep. Dir.: Mrs. Ida Barker JU 3-1209

ORGANIC GARDENING CLUB—
Third Friday, Floral Building, 7:30 p.m.
President: Robert H. Calvin
Box 296, Solana Beach SK 5-1430
Rep. Dir.: Mrs. Hermina Hilkowitz CY 6-2282

SAN DIEGO CAMELLIA SOCIETY—
Second Friday, Floral Bldg., 7:30 p.m.
President: Clive Pillsbury
3452 Cromwell Pl., S.D. AT 4-1233
Rep. Dir.: Mrs. Lester Crowder CY 5-5871

S.D. CHAPTER CALIF. ASS'N NURSERYMEN
Fourth Thursday, 7:30 p.m.
President: Frank Antonicelli
1525 Fort Stockton, S.D. 3 CY 5-2808
Rep. Dir.: Bill Giacinolli JU 2-2929

SAN DIEGO COUNTY DAHLIA SOCIETY
Fourth Tuesday, Floral Building, 7:30 p.m.
President: Arthur Harris
702 Rosecrans, S.D. 6 AC 3-6497
Rep. Dir.: Dr. J. W. Troxell AT 2-9131

SAN DIEGO COUNTY ORCHID SOCIETY—
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762 N. Granados, Solana Beach SK 5-4343
Rep. Dir.: Elizabeth A. Newkirk BR 4-2042

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9557 LaMar, Spring Valley HO 9-9946
Rep. Dir.: Mrs. Mary Bray Watson AT 4-2669

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Rep. Dir.: Mrs. Joseph J. Kenneally, AC 3-6183

SAN DIEGO SUCCULENT SOCIETY
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Third Thursday, Floral Building, 8 p.m.
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GARDEN CLUBS NOTICE

Affiliate membership in the San Diego Floral Association is available to all garden clubs. Membership fee: $10. Groups holding meetings in the Floral Building contribute an additional $15 to the building maintenance fund.

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OTHER GARDEN CLUBS

AMERICAN BEGONIA SOCIETY
San Diego Branch
Fourth Mon., Barbour Hall, University & Pershing 8:00 p.m.
President: Dr. Hazel McBride CY 5-1127
San Miguel Branch
First Wed., Youth Center, Lemon Grove, 8:00 p.m.
President: Mrs. Jack Brook HO 6-0162

CABRILLO—MISSION GARDEN CLUB
Third Thurs., Members' Gardens, 9:30 a.m.
President: Mrs. Raymond K. Stone BR 7-7134

CARLSBAD GARDEN CLUB
First Fri., VFW Hall, 1:00 p.m.
President: Mrs. Doris Simpson PA 9-1515

CHULA VISTA FUCHSIA CLUB
Second Tues., Norman Park Recreational Center, 7:30 p.m.
President: Mrs. J. L. Riese GA 2-0587

CHULA VISTA GARDEN CLUB
Third Wed., C.V. First Christian Club, 1:30 p.m.
President: Mrs. William R. Williams GA 2-7627

CLAIREMONT GARDEN CLUB
Third Tues., Clairemont Community Center, 10:00 a.m.
President: Mrs. Wm. Cordes BR 6-4182

CORONADO FLORAL ASSOCIATION
No regular meeting date, Christ Church Parish Hall
President: Capt. Frank T. Sloat HE 5-3325

CROWN GARDEN CLUB of CORONADO
Fourth Thurs., Red Cross Bldg., 1113 Adella Lane, 9:30 a.m.
President: Mrs. J. Dunham Reilly HE 5-4695

DELCADIA GARDEN CLUB
President: Mrs. Knute Eastman PL 3-3029

DOS VALLES GARDEN CLUB (Pauma Valley)
Second Tues., Homes of members, 1:30 p.m.
President: Mrs. Jack Thornburg PI 2-3225

ESCONDIDO GARDEN CLUB
Third Fri., Women's Club House, 1:30 p.m.
President: Mrs. Albert Seibert SH 5-6933
Flower Arrangers Work shop—first Friday, 9:30 a.m.
Horticulture Workshop—fourth Friday, 9:30 a.m.

EVA KENWORTHY GRAY BEGONIA SOCIETY
Third Mon., Community House, La Jolla, 7:30 p.m.
President: Col. Edwin P. Lock, Jr. GL 4-4752

FALLBROOK GARDEN CLUB
Last Thurs. Reche Clubhouse, 1:30 p.m.
President: Mrs. Nelson Bender RA 8-2730

IMPERIAL BEACH GARDEN CLUB
Third Tues., South Bay Community Center, 1:00 p.m.
President: Mrs. Al Hague GA 4-9425

LAKESIDE GARDEN CLUB
Third Mon., Lakeside Farms School, 7:30 p.m.
President: Mrs. Cecil Carender HI 3-1575

LA MESA SPRINGHOUSE GARDEN CLUB
Third Thurs., Porter Hall, La Mesa, 7:30 p.m.
President: Cdr. Alfred A. Paulsen HO 6-B366

LA MESA WOMEN'S CLUB (Garden Section)
Third Thurs., La Mesa Women's Club, 1:45 p.m.
President: Mrs. John Casale HO 5-0997

LEMON GROVE WOMEN'S CLUB (Garden Section)
First Tues., Lemon Grove Women's Club House, 1:00 p.m.
Chairman: Mrs. Frank Barber HO 6-B641

MISSION BEACH WOMEN'S CLUB (Garden Section)
First Fri., Mission Beach Women's Club House, 9:00 a.m.
Chairman: Mrs. John A. Horrell HU 8-3293

NATIONAL CITY GARDEN CLUB
Third Wed. National City Community Bldg., 7:30 p.m.
President: Kenneth Boulette GR 7-9240

O. C. IT GROW GARDEN CLUB
Second Wed., South Oceanside School Auditorium. 7:30 p.m.
President: Mr. Vere E. Goff PA 9-3771

PACIFIC BEACH GARDEN CLUB
Second Mon., Home Federal Friendship Hall, 7:30 p.m.
President: Mrs. Ernest Ambort BR 6-1595

POWAY VALLEY GARDEN CLUB
President: Mrs. Raymond Stockes RI 8-2243

RANCHO SANTA FE GARDEN CLUB
Second Wed.
President: Mrs. Hardy H. Kent PL 6-142B

SAN DIEGUITO GARDEN CLUB
Third Wed.
President: Mrs. Vincent Vella PL 6-1908

SANTA MARIA VALLEY GARDEN CLUB
Second Mon., Ramona Park, 10:00 a.m.
President: Mrs. Dorace Scarbery ST 9-0428

VISTA GARDEN CLUB
First Fri., Vista Recreation Center, 1:30 p.m.
President: Mrs. Jack Morgan PA 4-7510

VISTA MESA GARDEN CLUB
Second Tuesday, Linda Vista Recreation Center, 8:00 p.m.
President: Mrs. John Hoaglin BR 7-1368

COVER - Twin Oaks

Long before *The Explorers* came, long before the *Time of the Bells*, this magnificent pair of live-oaks was a landmark for the ancestors of Father Serra's children. These oaks were almost centenarians when Columbus landed: foresters estimate their age at well over 500 years.

As the Indians used these oaks to refer to their hunting grounds in the Valley of the Twin Oaks, so also did the Mountain Men, the Osunas, the Ortegas, and the Portillas designate this fertile valley. The rich soil and abundant subterranean water which produced such trees accounted for outstanding crops of muscat grapes and stone fruits. Today the thriving rural community of Twin Oaks carries on this unbroken tradition.

The "twins" themselves stand in the front yard of Mrs. Virginia Merriam Jordan, whose father homesteaded the land in 1875. In the cover picture, Mrs. Jordan appears (left) with her neighbor, Mrs. Rosalind Sarver. For all of her rights of ownership, her 80-plus years and her sprightly personality, Mrs. Jordan is dwarfed by these mighty giants, a landmark for the past five, and one can hope, the next five, centuries.

CALENDAR

February 10-11
San Diego Camellia Society Camellia Show, Conference Bldg., Balboa Park. Sat. 2-9 p.m.; Sun. 10 a.m.-6 p.m.

February 13 & 27
Flower Arrangement Workshop; Mrs. Arthur J. Mitchell, instructor. Floral Bldg., 10 a.m.

February 22-March 4
World Flower & Garden Show, Pan Pacific Auditorium, 7600 Beverly Blvd., Los Angeles.

February 26
Flower Arrangement Class; Mrs. J. R. Kirkpatrick, instructor. Floral Bldg., 9:30 a.m.

March 13 & 27
Flower Arrangement Workshop; Mrs. Arthur J. Mitchell, instructor. Floral Bldg., 10 a.m.

March 17-18
San Diego County Orchid Society Orchid Show, Conference Bldg., Balboa Park. Sat. 1-10 p.m.; Sun. 10 a.m.-6 p.m.

March 26
Flower Arrangement Class; Mrs. J. R. Kirkpatrick, instructor. Floral Bldg., 9:30 a.m.

California Garden

February-March, 1962

San Diego's North County

GREEN HILLS RICH VALLEYS BRIGHT FLOWERS

THE grass is always greener in northern San Diego County. The soil in those valleys is deep, and the fields are bright with flowers. February is a good month to explore the area, for the half-circle from Encinitas through Carlsbad and Vista is the center of a $3 million *winter* cut flower industry. Production of nursery stock, a business that spreads across the North County from Solana Beach to Valley Center, adds another $41/2 million to San Diego County's agricultural totals.

Fields of brilliant poinsettias are still intact, from the Paul Ecke Ranch headquarters on Saxony Road in Encinitas as far north as San Onofre. Only a few gladiolus blooms remain in the fields, but there will soon be a new crop; stock is in its prime now, offering bright splashes of white and red and blue tones to the traveler along US 101; and ranunculus will soon become the dominant field flower.

Gardening with a commercial slant is commonplace throughout the North County towns. Not only the giants of the nursery and flower trade are here, but the many hobbyists who have had their stock outgrow their space, and have found themselves in business. Just off the highway in Solana Beach are the Comstock dahlia fields. In Encinitas, on the west side of Mackinnon Avenue just north of Cardiff, acres of shadecloth shelter thousands of carnation plants; carnations are the number one cut flower crop in the County, averaging over a million dollars annually. Elsewhere in Encinitas, you may see a corner yard planted with rubber tree cuttings, a small field of geraniums, or small glass or lath houses filled to overflowing with orchids or succulents, whose owners have more or less fallen into the trade.

Here you find not only two of the great names of the nursery business, DeHaan and Macpherson, but you find a small "ranch" nursery, with its wares spread out in an avocado orchard. You find penny crops and dollar crops, from carnations at a nickel a bloom to Horace Anderson's rare tropicals, grown under glass at the north end of Leucadia, where he may start with seeds costing many dollars each.

Wherever you go in Carlsbad you see both large and small plantings of Bird-of-Paradise, the blooms hooded at this season to ward off the real birds. This town is headquarters for California Birds, Inc., the company owned by Donald A. Briggs and the Pedley brothers, which ships more than a million blooms annually to all parts of the world. But Birds-of-Paradise are only the beginning of the Carlsbad story.

Commercial horticulture has been important here since the early 1920s. Carlsbad is the home of Luther Gage's famous Tecolote strain of ranunculus; it accounts for some 90% of the nation's freesia bulbs; it is the center of the County's gladiolus crop, second only to carnations in dollar volume; it was here that E. P. Zimmerman developed his famous strain of hybrid watsonias.

On one short stretch of Park Drive in the Carlsbad foothills, you can see five acres of geraniums growing in the fields of Arlo Hubbard, the Briggs Bird-of-Paradise headquarters, and Hummel's Exotic Gardens, where upwards of 4000 varieties of plants, mostly succulents, are grown. Hummel carries on a mail order business throughout the world.

One flowering landmark of Carlsbad, long familiar to everyone who travels Freeway 101, has changed recently. The bougainvillea vine which reached to the top of a 60-foot cypress is now spread over the ground. The cypress had to be destroyed, but the bougainvillea remains, a huge ground cover, covered in its turn with purple blooms.

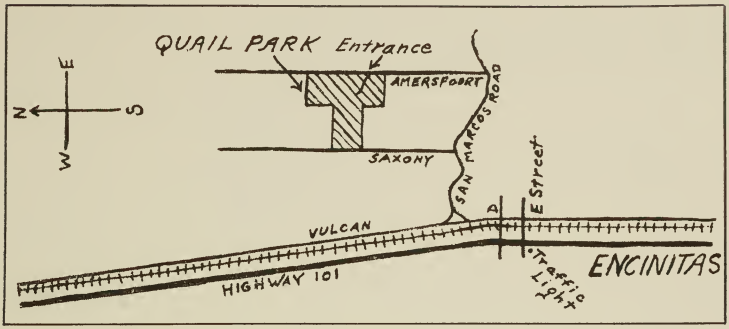
Calla lilies, orchids, and iris are other plants which occupy growers in the back yards and fields of Carlsbad. All of these crops keep air freight and the post office busy, for as with similar crops in the other communities, their markets are most often outside the County.

Eastward from the coast, avocados and citrus become more predominant, but flowers and ornamentals are still an important though less obtrusive part of the landscape. Under an orchard in Vista, the Vista Violet Farm grows violets with blooms from dime to dollar-size. Geranium growers have found the climate to their liking. Fruiting ornamentals, many still in the experimental stage, promise to become important in the future.

Southeast of Vista, under native live-oaks similar to those shown on the cover, the Sarver Nurseries of San Marcos specializes in azaleas and dwarf cannas. One observer remarked that Mrs. Sarver's fields of blooming cannas evoked the same feeling as the tulip fields of Holland, Michigan.

Further east, iris growing comes into its own, centered north of Escondido, where Tom Craig's Rancho de las Flores (producer of day lilies as well) is perhaps the most famous, and in Valley Center and Pauma Valley, where many smaller growers operate.

ALL told, the growing of cut flowers and nursery stock is an industry approaching $10 million in value to San Diego County. Traditionally centered in the spacious north, population growth continues to push it ever northward: Donald A. Briggs has moved his gladiolus fields from Carlsbad to Bonsall, where he ships to Los Angeles from a 30-acre stand; Johnson Wholesale Nursery, grower of ornamentals, has moved from La Mesa to Valley Center. At the same time, population and smog have motivated growers from Los Angeles to move southward, a trend that will likely increase. Northern San Diego County is thus caught in a squeeze which may wreak a startling change in its green fields, rich valleys, and bright fields of flowers. Better see it while you can.



QUAIL PARK

Botanical Garden For San Diego County

By Dorothy S. Behrends

THE Quail Park Botanical Gardens in Encinitas are slowly evolving into a place of importance on the "must-see" list of visitors to San Diego County. This 26-acre park, under development by the County Department of Parks and Recreation in cooperation with Quail Gardens Foundation, Inc., also will answer a long-felt need among San Diego residents for a public garden of botanical distinction. A master plan for the Park is currently being prepared by County Landscape Architect Peter Cuthbert.

By displaying the culture and uses of the wide range of subtropical plants that can be grown out-of-doors in this area, Quail Park should become a mecca for home gardeners, horticulturists, commercial growers, bird watchers, and for tourists having one or more of these interests. It will also provide a nature-study classroom for students of all ages.

Here is a partial list of what visitors can expect:

• Plans call for an ample parking area. In close proximity will be a fragrance garden, with handrails to guide sight-handicapped persons.

• The vast existing collection of cacti and succulents is being identified and labeled by members of the Palomar Cactus and Succulent Society to add enjoyment to the viewing of these plants.

• A large sheltered garden, to be erected on the crest of the property, will house ferns, begonias, bromeliads and philodendrons in abundance.

• Another envisioned sheltered area is to be built against one of the steep cliffs, taking advantage of the limestone bank in which Maidenhair ferns will be grown with a time-controlled mist system.

• The native chapparal will be left in its present state, with the addition of fire-resistant shrubs along the outer borders of the fenced gardens. This natural border will serve as a quail preserve and will also attract other wild birds. A cage to house people who wish to watch hummingbirds while they feed on flowering shrubs will also be of interest to nature lovers.

• A palm canyon, containing more than one hundred named varieties, is another sight to be enjoyed by visitors in the future.

• A four-acre portion of the Park will be devoted to subtropical fruiting shrubs and trees. In this area, growers will explore the possibilities of new plants for both home and commercial uses.

• A Memory Grove, where many trees will be planted as memorials, is envisioned.

• Specialized garden clubs will take over responsibility for entire plantings of their favorite plants. In season, these groups will schedule demonstration days for such things as rose pruning, dahlia tuber division, begonia propagation, fern division, etc.

The Quail Park acreage forms a T across the ridge between Amersfoort and Saxony Roads in Encinitas. Flowering eucalyptus line the cross of the T at the entrance along Amersfoort, and cypress border the gracefully curving drive to the crest of the hill. San Diego County accepted this land in 1957 as a gift from Mrs. Ruth Larrabee. The existing plantings, highlighted by an outstanding succulent collection, pointed to the climatic advantages of the site, and indicated to many San Dieguito residents that a botanical garden here was desirable and feasible. In mid-1958, a study committee, which eventually grew into Quail Gardens Foundation, Inc., was formed.

The Foundation was organized to assist the County in financing and developing the botanical garden. Memberships, as well as tax-deductible

donations, are solicited from all interested persons and organizations.

The excess seeds and plants that inevitably will accumulate are to be divided once a year among members in good standing. Seeds will also be exchanged with other botanical gardens throughout the world. The Foundation welcomes—it may be said, "insists" upon—memberships, if individuals expect to share in the excess-plant program.

Many of the garden clubs in San Diego County, enthusiastically supporting the project, have asked what they can do besides joining the Foundation. One suggestion that has met with favor is the donation of a regulation bench on which visitors may rest and enjoy the garden while relaxing. Each club will place its name on a marker on the bench.

The contributions of individual citizens toward this horticultural milestone have been many and varied, but one in particular deserves special mention. Paul Ecke, whose poinsettia fields are one of the delightful views from the Park, donated land for a ball park in the close vicinity so that the entire acreage of Quail Park might be used as a place of natural scientific enjoyment in the form of a Botanical Garden.

Fencing to protect the valuable plant material that has been subscribed by private citizens is the first move on the program for permanent progress. Plants must be protected from man as well as beast: much of the original material left on the land by Mrs. Larrabee has disappeared without the knowledge of the Park Department. Thus the Foundation insists that a fence be built before accepting delivery of material. The timetable for fencing, as well as for grading and installing water and sanitary facilities, will depend on budgetary considerations.

Mrs. Larrabee left an outstanding framework of land and plants to San Diego County. As the Botanical Garden grows, residents and visitors will appreciate the gift more and more.

Mrs. Behrends is serving as secretary of Quail Gardens Foundation, Inc. Memberships may be sent to her at 442 Orpheus Ave., Encinitas.

Annual Memberships:

Sustaining (person, club or business)	$50
Supporting (person, club or business)	$25
Society (group)	$10
Junior Group	$5
Active (Individual)	$3

A panoramic view of the east section of Quail Park shows the entrance road bordered by cypress (background), a small portion of the vast succulent plantings, and a few of the many Silver Trees which thrive on the slope. The reverse slope, behind the camera, is virtually frost-free, will be planted with subtropical fruits.

At the crest of the Park acreage, many rare varieties of succulents have attained unusual size.

OF TIME AND A GARDEN

A Great Garden In Rancho Santa Fe

Number Two in a series
on gardens of outstanding interest
in the San Diego area

By Thos. L. Crist

A FRIEND said "You speak and write of gardens. But when does a lawn or a yard become a garden? Just what is a garden? Is it a work of art, a thing of beauty, or a vegetable plot?" I paused to think, because a garden can be many things: a work of art, an accident of nature, a vegetable plot. And a great garden is all of these and more. It is the loveliest possible distillation of the best in nature, refined by an artist, and mellowed by time.

In the eastern United States, in England, or on the Continent, great gardens are the result of at least one hundred to two hundred years of growth, development, and selection, a combination of time and human effort. The greater contribution is made by time. Growth is slow, and great trees, like men, need years to reach maturity. Due to climatic conditions, plants and trees grow for only three to four months and rest for the balance of the year.

Southern California, and in particular the San Diego area, is much more fortunate in that plants maintain growth and development throughout most of the year. Our climate cuts a century in less fortunate areas to a generation here. Time remains the most important ingredient, but development is rapid, and truly great gardens can be achieved in twenty-five to thirty years.

The Gifford Ewing garden in Rancho Santa Fe is an excellent example of what may be accomplished in a comparatively short space of time. From a barren, hardpan mesa to a great garden in less than thirty years could only be achieved where growth is almost continuous.

In the early 1930s, Charles Francis Meyer, after a successful career with Standard Oil in China, chose to build his retirement home at the Ranch; the exact site was a flat mesa top just south of Skyline Drive with a magnificent view of Black Mountain to the east. Privacy was assured by the road on the north, which is considerably below grade, and deep canyons on the east and southwest. Plans for a large home with swimming pool and spacious grounds were drawn.

Mr. Meyer proposed to create a garden in the English tradition, with the feeling and the atmosphere of his native Katonah, New York, and a smaller garden with the traditional characteristics of his beloved China. He sent landscape architect Paul Avery to Katonah to study the gardens and countryside there.

Trees and shrubs which would thrive in Rancho Santa Fe were specified by Avery to create the same effect as the great oaks, elms and maples found growing naturally in Katonah. The Chinese garden was designed around a stream and pools as a setting for Mr. Meyer's fine collection of Chinese garden art (now on display at the La Jolla Art Center). The problem was to create a garden in the rain-soaked English tradition on that forbidding hardpan.

Bulldozers, cranes, and operators began to work their magic. Seven large live-oaks were chosen near Ramona, and workmen began the Herculean task of transplanting them to the building site in Rancho Santa Fe. One was so large that it blocked traffic for three months and resulted in a county ordinance against such undertakings. From the mountains to the east huge granite boulders began a journey to line the banks of pools and streams, to make waterfalls and rapids in the Chinese water garden.

Great planting basins were dug for the trees and vertical irrigation pipes were installed to carry water to the deep root areas. A caravan of trucks brought in prime top soil to cover the garden to a depth of eighteen inches. Nurseries, near and far, were denuded of their finest specimens of cedars, both incense and deodar, of Italian cypress, of juniper and pine. This garden, created whole, must not change; no deciduous trees or shrubs could be used. The Chinese characteristic of constant beauty and serenity must permeate the whole garden, unmarred by stark trunks and barren branches.

AND—one day the garden and home were complete—a thing of beauty. Time had been borrowed from the mountains and the nurseries and moved to Rancho Santa Fe, but the garden was not yet great. Only the effort was great. Time stood out in bunches, the great oaks, the yellow cliffs, the purple mountains on the horizon. The slope to the water garden was a jungle of jagged edges with

Right: A flowering crab stands there, just to the right of the path down to the pond; rhododendrons and azaleas emphasize the opposite bank with translucent color; the tree ferns have responded to a good cool mulch. Only the center is open to full mid-day sun to urge waterlilies to profuse bloom. Mrs. Ewing speaks of 7 microclimates in this lower garden.

Below: Just 30 years ago, time stood out in bunches. The slope to the water garden was a jungle of jagged edges. The land had yet to adopt the foreign elements.

# of Time and A Garden . . .

Circa 1932: This live-oak accounted for a county ordinance.

two sturdy piles of stone forming bases for a lantern and a Chinese idol. The sweep of the pond was still too clean, too definite. The land had yet to adopt these foreign elements as its own; time would be necessary to soften the edges, to develop character and greatness.

Mr. Meyer did not live to see his garden achieve maturity, nor did two of his successors. He was devoted to the garden and was gravely concerned about the vagaries of wind and drought and Colorado River water, but there is evidence that later owners were less than enthusiastic. Only time, with patience, worked its wonders.

A visitor walked down the paths one day, paused on the stepping stones through the brook, and listened to water purling down ancient granite. *A flowering crab should stand there, a spray of almond on that point, rhododendron and azaleas should emphasize that bank. Those tree ferns could use a good cool mulch, and there ought to be a liquidambar over there to call attention to Fall. A spray of clearest yellow broom should reach out to Spring and the sun from the undercover, just there. If only . . .*

Time, or Providence, seemed to want the visitor's help, for Mrs. Gifford Ewing and her husband acquired the property in 1953. With Mrs. Ewing's wide knowledge of plants and gardening, and her unusual love for hard work, the garden really began to thrive for the first time since the death of Mr. Meyer.

Horses, ducks, and chickens were brought in, wild birds were fed and encouraged, all elements of nature were urged to contribute a natural share to the garden. Not a leaf or pruning was wasted. Everything went to the compost heap, then back to the soil as a mulch. According to Mrs. Ewing, a native of Virginia, our climate burns up humus so fast that it is almost impossible to keep ahead of the loss. Nonetheless, she has made an obvious gain of another eighteen inches of the choicest planting mix! She averages twenty cubic yards of compost each year plus uncounted tons of sawdust, peat, and wood shavings. The trees and plantings have responded naturally.

IN the beginning, and in spite of the great live-oaks, the garden was almost entirely a sun garden. Now, with the oaks three to four times their original size, the cedars towering to seventy or eighty feet, and with magnolias, podacarpi, and pines reaching up and out to fill all space, the garden has almost completely changed to a shade garden. Only the great lawn between the house and the pool and the opening beyond remain in full sun to permit an unobstructed view of Black Mountain. The center pool area of the water garden is open to full mid-day sun to urge the waterlilies and water hyacinth to profuse bloom.

From the constancy and serenity in the original conception of Mr. Meyer and Mr. Avery, the garden has achieved constant seasonal change and beauty, with accents on harmony, not quiet, peace not serenity. Its constancy now is the constancy of growth, change, and development, reflecting the philosophy of its head gardener.

Mrs. Ewing does not like to sit quietly and contemplate beauty; she works hard to mold and create it. She is fascinated by seeds and their germination, she loves to feed plants, animals, birds, fish, and to see them prosper under her care. No detail is too insignificant, no plant too small for her efforts. Days are spent in work with her gardeners on individual areas and plantings; and her enjoyment is concentrated on the thing at hand. But, at night, when no work can be done, when details are blurred, the garden as a whole comes into its own for its gardener. A stroll down well-known paths, across smooth stones, past pale indistinct blossoms with branches soughing gently, and her reward is complete. Achievement is worth its effort.

The whole is artificial, of necessity, because of its selective concentration; because the rare elements of loveliness have been gathered the world over and concentrated in five alien acres. From the Himalayas to the Appalachians, from Greece to China, from the Nile to the Amazon, and from Hawaii to the Canaries, botanists have gathered, and hybridists refined, specimen plants which have been reintroduced and displayed in a natural setting. These gardens epitomize garden beauty, concentrated, refined, but natural beauty.

The ability to disguise work, effort, artificiality is the mark of an artist; it differentiates a good gardener from a great one. Plantings, if humanly possible, should look as if they were an accident of nature. Only the number of lovely accidents in one concentration should reveal the gardener.

Beneath a towering incense cedar a *Cyclamen neapolitanum* blooms beside a stone, exactly as if a gust of wind had wedged the seed beneath the sheltering ledge of the rock. In the bend of a sunny path, where it comes as a delightful surprise to the wanderer, glows a *Stapelia divaricata.* The overhanging rock shades the foliage just enough; the environment is natural. "That? That's a *Thunbergia gibsoni.* I know I should never use it there among those shrubs. But I can't resist its brilliant orange flowers in unexpected places." Mrs. Ewing knows full well that the natural trellises for vines are shrubs and trees. A Lady

Above: With the oaks three to four times their original size, cedars towering to 70 or 80 feet, with magnolias, podacarpi, and pines reaching up and out, the garden has completely changed.

Below: Nurseries were denuded of their finest specimens of cedars, of Italian cypress, of juniper and pine. Corner of the swimming pool is visible at right in both pictures.

Banksia rose runs rampant through a forty foot deodar.

Along with good taste in placement, a gardener must know where and under what conditions a plant will thrive. Mrs. Ewing speaks of seven micro-climates in the lower garden! Such knowledge comes from careful study and intimate experience; but when put to use, it results in natural environments for plantings.

A detailed knowledge of climate conditions is essential, but it must be coupled with an equal knowledge of the growth habits, the demands of a particular plant. For Mrs. Ewing, individual plants almost take on human characteristics and temperaments. "That Mexican Tree Fern is certainly lovely this year, but you know, we moved it some years ago, and it was absolutely furious." "Those arborvitae there? (about a foot shorter than two others) They were transplanted last year and they are just sulking," and she stooped to pull out a wayward *Asparagus sprengeri.* Mrs. Ewing has reared children and she knows exactly how to cure "sulks"—tender loving care until the offended one is appeased.

Rearing children and tending a garden have a great deal in common. "As a twig is bent, so shall it grow," was

Gifford C. Ewing

said of a plant and meant of a child. Patience, hard work, and constant attention are essential, and the reward is not measurable in the status symbols it will buy. With children, their continuing happiness with seasonal achievements reflects in joy to the parent. With gardens, the constancy of harmony and peace with seasonal flowerings is the reward of the gardener.

These fleeting periods of blossoms must be well planned for, and the materials chosen carefully. According to Mrs. Ewing, agapanthus, clivias, and some amaryllis have a constant beauty which permits them to be included in the main gardens. Their blossoms and seed pods are extra dividends, a spot of seasonal color. Daffodils and crocus are so transitory that they must be used in conjunction with other plant materials, allowed to naturalize beneath trees and among rocks, to be enjoyed for their short span of beauty. Tulips, and Mrs. Ewing is famous for lovely tulips, are a must, thousands of them. But never save a bulb. Compost it! And annuals, annuals are quite another matter. Such short-lived plants are for a cutting garden only; constancy is not one of

Plantings, if humanly possible, should resemble accidents of nature. How many lovely accidents can you discover in these pictures? The most obvious are the "wild" orchids (*above*) and tree wisteria (*below*).

their virtues. They make a palette of color down a hillside or an arrangement for the library or dining table, but they are not building materials for a garden.

MRS. EWING'S ideas and opinions are definite, sharp, and to the point. If they were not, her garden would not be what it is, a constant, peaceful thing of beauty—a great garden. Time has been there; it is the towering trees, the worn edge of stone, the massive shrubs and rampant vines. Time has provided the cyclorama, the natural setting for a concentration of lovely accidents.

And a great gardener has been there too. A flowering crab stands there, just to the right of the path down to the pond; in Spring a spray of almond sheds a shower of petals on that point of land; rhododendrons and azaleas emphasize the opposite bank with translucent color. Fingers of clearest yellow broom reach out greedily for the morning sun. The tree ferns are mulched, and an ambar fans its great leaves in front of a huge evergreen cypress. Scarlet banners welcome Fall, and in Winter the bare branches blend with evergreen.

This, my friend, is a garden, a truly great garden.

T. D. Perkins

Serenity

By Alice M. Greer

An ensemble imparting a serene, dignified atmosphere. Use of a variety of seasonal and regional plant material creates a composition full of suggestion and association. Japanese casual, as well as formal, precision is pointed; variation, simplicity, grace, without monotony.

Gray-brown manzanita scrag, distorted by the elements on a rocky-faced cliff; pine, symbol of long life, according to Japanese tradition; purple-pink Rose Marie rose and blush-pink azalea, youth and spring, are harmoniously blended.

Scrag accents space and upward movement. Height gives freedom to make pleasing lines and to show plant identity. Careful attention to dark and light areas is considered. Strong, well-placed darks of foliage, old bronze usubata container, figure (antique Chinese, gray-brown), and teak bases give character; cluster flowers bring variations of light. Unsymmetrical radiation is modified by subordination.

It is not horticultural perfection nor mathematical adherence to rules that insures beauty of a composition that will linger in the mind, but it is the projection in an apparently artless, unrestrained style, of material that may not seem distinctive, yet will stir a thrill in the spectator. Such a composition is a vital, dynamic, spiritual force in a room.

GARDEN CHORES

February & March

PRUNING, planting and spraying make our southern gardens a scene of great activity in February. In many respects it is our second season: fall provided the first major work and clean-up period. This should be a hint to do now what wasn't completed last fall.

Early February is a good time for pruning dormant trees and shrubs. Waiting this late affords plants the longest period of dormancy. Prematurely pruned plants will sometimes produce a flush of growth subject to frost damage, or will be retarded by lack of proper growing conditions.

March is not too early to get those summer annuals seeded. Consider vegetables for color and structural interest in your flower borders. Sculptured effects can be achieved by using rhubarb, chard, kohlrabi, Brussels sprouts, triple-curled parsley, prize head lettuce. Artichokes and rhubarb add a permanent note to the shrub or perennial border. Vegetables integrated with flower plantings will capture the interest of friends not often enthusiastic over gardening.

Keep up your rotation of gladiolus bulb planting for color and cutting. The miniature butterfly hybrids, popular with flower arrangers, are available in nurseries this spring. They come in 10 colors, and produce 2½-3 foot spikes with 16 to 20 florets. Imported Lily of the Valley pips are available early in February, with gloxinias, tuberous begonias and fancy-leaved caladium bulbs to follow.

February and March is still early enough to divide and transplant. Citrus, avocados, hibiscus, and the many subtropicals are better planted in March or later as the soil warms. Bamboo may best be divided now; be sure to lighten the soil of the planting area with wood shavings. Bamboo can very easily be drowned out by a poorly aerated soil before becoming established.

Wood shavings, processed Cedar, Redwood, and Douglas Fir (usually labeled as Oregon Pine) are finding popular use in conditioning hard-to-manage soils. Cedar and Redwood products have a longer life than Fir or Pine. The latter, in their faster breakdown, have more bacterial activity associated with decomposition and require a greater addition of nitrogen if plantings are not to show signs of hunger.

James Cauffield

Landscaping on San Diego's Freeways

By H. B. Whitnall, Director of Maintenance, District XI, State Division of Highways

A MAJOR problem in planting and maintaining planting on California highways is the cost, which is mounting each year. In 1950-51 for instance, the Division of Highways spent $606,127 for planting and erosion control, while the 1960-61 budget for roadside planting and landscaping is $4,609,000. This increase is in line with the legislative intent expressed in Assembly Concurrent Resolution No. 132, adopted in June, 1957, which is printed at the end of this article.

The much publicized California climate is another big problem, because "sunny" California also means "little-rain" California for part of the year. This basic pattern of winter wet-summer dry is constant over the entire state, differing only in intensity. This long summer drought eliminates from consideration for highway landscaping more than 90% of the world's plants, since few can live very long without water.

During the years of development of California's current roadside policy, two types of planting have been adopted: "functional planting" and "urban landscaping." In general, "functional planting" is basically utilitarian, as its name indicates, while "urban landscaping" goes beyond pure function and seeks aesthetic effects as well.

The modern uses of functional planting could be said to be an outgrowth of the early day roadside tree plantings for road surface protection from the sun, for these trees were actually functional. However, generally speaking, the use of plants to reduce maintenance costs dates from about 1930 when maintenance forces began planting mesembryanthemum or "ice plant" to reduce erosion, eliminate weeds and control fire.

Some of the things functional planting provides today are erosion control; delineation of route, structures, and curves; center headlight screen; roadside screens to lessen noise, dust and headlight glare; ground cover for fire control and/or weed control; and screens for the benefit of adjacent development. Plants are used in great numbers on cut and fill slopes to control wind and water erosion. In many cases these functional plantings also beautify the road and blend it into, or enhance, the natural landscape.

Three types of slope stabilization are used. Type "A" is for steep slopes, and is relatively expensive—$2 to $3 per square yard. Its basis is a grid of wood, 2x4s vertically, 1x4s horizontally, with openings approximately a yard square. The framework is held in place with stakes. The openings are filled with compacted top soil, then covered with six inches of straw. Finally, wire mesh is laid over the whole and fastened to the grid. Ground cover is then planted in the soil beneath the mesh and straw.

Type "A" slope stabilization was first used on the Arroyo Seco Parkway (now the Pasadena Freeway) in the Los Angeles area. Although these slopes are quite steep (one to one), there have been no serious failures in more than 20 years. Much of the wooden part of the slope control has rotted out by now, but the plant roots have spread and matted so that the structural support is no longer needed.

Type "B" stabilization, commonly used on 1½ to 1 slopes, is similar to Type "A", without the wooden grid. It costs about two-thirds as much as Type "A", and is used wherever there is danger that the toe of slopes might slump and intrude on adjacent property or communication facilities.

Type "C" is used on 1½ to 1 or flatter slopes and consists of straw rolled into a cultivated surface and planted. If seed is used instead of plants, the seeding is done before the straw is placed.

The other kind of planting—"landscaping"—is understood to mean something more than functional planting. It includes planting with a purely aesthetic purpose. Landscaping is considered wherever it is necessary to blend the right of way into adjacent development.

While this type of planting goes beyond function and strives for pleasing effects, nevertheless virtually all of it is also highly functional. It is planted for aesthetic reasons, but it also provides fire and weed control, delineation, headlight, noise and dust screens.

Sprinkling systems are usually installed in landscaped areas to give a wider choice of plant materials. With more water, the plants grow better, and the over-all effect is greener, more lush. Because of the high cost of watering and maintenance, better landscaping can be accomplished when a cooperative agreement to cover these costs is made with the community. Such agreements allow much more latitude in design and choice of plants, and have resulted in some of the finest sections of landscaped freeway.

The most important consideration is watering, since even drought-hardy plants must be irrigated for several years before their root system is adequate to support them. Most urban landscaping jobs must be watered indefinitely. If for no other reason, the plants close to the traveled way must be washed off at least once each week to eliminate the greasy dust film generated by fast-moving traffic, which would eventually otherwise kill the plants.

Choosing the kinds of plants brings up a new set of problems. Since broken or dramatic effects divert the motorist's attention, it is best to use only a few varieties and create a smooth effect. But this is only part of the job. Plants must be considered for their effect visually, for their adaptability to local growing conditions, and for their ability to thrive close to moving traffic.

Will they do well on a south slope

in this latitude? What about drainage? Is the soil acid or alkaline? Are the plants deep-rooted to penetrate and hold the soil, or will they slide when the earth becomes saturated? What will be the character of the plants in the local climate—compact and bushy, or straggly? Can they be obtained in quantities?

Sometimes a hundred thousand shrubs and trees, and a half million ground cover cuttings are needed all at one time if several jobs are starting—more than all the commercial nurseries can provide on short notice. Nor can these demands be staggered, for most plantings must be made in summer before the soil is too wet to work. The new plantings then have the wet winter in which to get established. A system of advance ordering and buying has been worked out to help handle the tremendous demands.

Ivies and iceplant are used in great quantities for these different slope controls, and for control of weeds as well. They are often used also in both urban and rural areas as fire control cover because they stay green and are not flammable. This is a far cry from the 1920s when maintenance crews burned the roadsides each year as the grass got dry and became a menace.

A number of hardy shrubs have been used for sound, dust, and headlight screens on the sides of urban freeways—several of the acacias, eucalypti, and California natives are used for these purposes with excellent results. The eucalypti also have proven to be one of the most useful trees for use in the arid sections for delineation of overcrossings, curves, bridges, and general screen planting.

These are all specific values obtained from planting. In addition there are the intangible values, the softening effect and the increased interest given the roadside area, both functional and beautifying. With between 25,000 and 50,000 trees planted each year, and between 100,000 and 200,000 shrubs, the Division of Highways more than compensates for those which must be removed for straightening or realigning the routes. This fact is often overlooked when critics complain of tree destruction.

CONSTRUCTION of State freeways in San Diego has not reduced the volume of vegetation that existed prior to construction. In locations where heavy vegetation was removed to make way for freeway construction, the freeway roadsides have been fully landscaped to an extent

After

U. S. 395 through Balboa Park

Before

that equals or surpasses the original vegetation. An example of this is illustrated by the two photographs of U.S. 395 in Balboa Park.

Construction of some of San Diego's freeways has required the removal of a minimum type of city street planting. In general, freeways through these areas have been planted with functional vegetation consisting of a ground cover of mesembryanthemum and a headlight screen of oleanders planted between the two roadways. The functional planting approximates the minimum city street planting which was removed.

In still other San Diego locations, no vegetation existed at the time of freeway construction. The completed unlandscaped freeway, of course, has not reduced the amount of vegetation. This is illustrated in the photographs of State Sign Route 94 at College Avenue (*above*).

It is also important to remember the practical, financial ceilings on landscaping, which can be raised only by added taxation or by reducing expenditures for highway modernization.

Early in the days of freeway landscaping (landscaped freeways were then called "parkways"), the Division of Highways found that it was virtually useless to landscape without adequate zoning controls against billboards. Obviously, the purpose of beautiful landscaping may be defeated by excessive advertising display.

The current policy of the Division is set forth in a resolution adopted by the California Highway Commission on April 19, 1951, which is implemented by an order of the Director of Public Works issued June 21, 1951. Basically, this order and resolution provide that no highway funds will be expended for landscaping of any section of freeway until the local governing body having jurisdiction has adopted proper ordinances prohibiting advertising displays "within view" of the freeway which is to be landscaped. This policy applies only to *landscaped* freeways, and certain minimum requirements as to regulatory ordinances, which must be met before landscaping will be performed, have been worked out by the Division.

With the revision and adoption in 1953 of the Outdoor Advertising Act in its present form, the Director's order applies only to freeways within incorporated cities. The Outdoor Advertising Act controls the erection of advertising displays in unincorporated territory.

Assembly Concurrent Resolution No. 132

Whereas, The Legislature of California finds:

(a) In the last 10 years more than seven million dollars ($7,000,000) have been spent in planting on state highways, but this amounts to only six-tenths of 1 per cent of total state highway construction expenditures of the same period; however, maintenance of this planting has cost more than eight million dollars ($8,000,000) in 10 years, and the annual cost is now approaching one million five hundred thousand dollars ($1,500,000) a year;

(b) Past policy of the Highway Commission has been directed purposely toward channeling a maximum amount of available funds into the construction of highway mileage that will provide immediate benefits to the traveling public;

(c) The Division of Highways under present policy undertakes two classes of construction work generally under the classification of planting, as follows:

i. Roadside development and control, which is constructed for the purpose of traffic control, economies of maintenance, or other engineering requirements. Within this class is included that work which may be required for erosion control, traffic safety, fire control, or traffic noise abatement;

ii. Landscaping, which is for the purpose of enhancing or preserving the aesthetic values of the highway and its immediate environs;

(d) Under present policy functional planting for roadside development and control is being done on a minimum basis consistent with actual requirements. Planting for landscaping is being done on freeways on a minimum basis, and almost exclusively in built-up or highly developed areas;

(e) Expenditures for landscaping and for design that enhances the attractiveness of highways are legitimate highway purposes for which the motor traveling public may properly be expected to pay;

(f) The appearance of freeways and other highways, and their design and landscaping in keeping with the immediate surroundings, especially in metropolitan areas, are major factors in their acceptance by the public in the affected communities;

(g) California's freeway development program can be greatly accelerated in the years ahead, largely as a result of the Federal-aid Highway Act of 1956, but such acceleration will depend in great measure on increased public acceptance which will be encouraged by attractive design and appropriate landscaping of freeways; now, therefore, be it

Resolved by the Assembly of the State of California, the Senate thereof concurring, As follows:

1. The California Highway Commission and the State Highway Engineer are commended for their past policies of economy in the matter of planting and landscaping;

2. In view of the expanded freeway development program now getting under way, the State Highway Commission is urged from this time on to give full consideration to functional planting and highway beautification in the formulation of its annual budgets for freeway construction and maintenance and local jurisdictions are encouraged to participate and cooperate in this program;

3. The State Highway Engineer is urged from this time on to give more attention to enhancement of the appearance of highways (particularly in metropolitan areas), not only by means of landscaping but also in the original design of structures and roadways. Wherever economically feasible under California's climatic conditions, consideration should be given to incorporation of parklike development in highway design;

4. The Department of Public Works is urged to portray at the earliest possible time in public hearings or on other appropriate occasions the nature of each proposed freeway design by means of artists' drawings or other visual aids in order to better inform the public as to the appearance of the freeway and its effect on the community;

5. It is the purpose of this resolution to inform the Highway Commission, the Department of Public Works, the State Highway Engineer, and the public generally, that the Legislature intends that a moderate increase in landscaping and other aspects of attractive design appropriate to conditions in this State be regarded as integral features of California's freeway program.

ZONAL GERANIUMS

Have you been taking geraniums for granted? Check here for the best varieties.

By Thos. L. Hosmer

PELARGONIUM HORTORUM is a highsounding, scientific name for what has been called the lowly geranium. It is the branch of the geranium family that the Southern Californian cuts down with an axe (sometimes) and the New Yorker pets and pampers in a pot no matter how high it grows. Without a doubt it is the easiest member of the family to propagate and grow, yet little is known about its enormous variety. In the trade, these lowly geraniums are called Zonals, a nickname derived from the prominent zones that many Hortorums have in their leaves.

There seems to be a great race on among growers to bring out an improved double red that likes to grow in a pot. And no wonder: reds account for better than 50% of all geraniums sold. Some of the best reds the world over are Irene, Dark Red Irene, Improved Ricard, Olympic Red, Better Times and Red Landry.

A new one called Conquistador, introduced by the Bode family in 1959, proved the best in the author's lath house last year. The plant is compact, low growing and well proportioned. Growing in six-inch pots, its foliage was tight on a well branched body, and the lovely, bright, dark red flowers showed no crimson tones whatever. The author picks Conquistador as tops over all the other reds he has tried. Better Times is second choice. I would hesitate to express this opinion in the East, since the many Irenes are better known there. In central New York state Mrs. Eschium is tops, but the writer's opinions are drawn from years of experience and thousands of miles of travel, talking with professional growers and laymen in the then-48 States.

Perhaps not sold as much as reds, the whites are and always will be popular. Snowball, Mme Bucher and Madonna, in that order, seem to be the most popular the country over, yet others are coming fast.

The most recent introduction among these "comers" is Holmes Miller's Magic White. Although not a true full double, it easily passes as one to the layman. The author has had Magic White in his lath house and growing grounds for over 10 years and it has never shown the bad habit of most whites of turning pink in sun or when watered. It is a free-flowering plant and quite bushy. Another very good white of the semi-double type is Gregerson's White, introduced in 1947. The Gregersons are now growing geraniums commercially in the Bonsall Heights District, just a stone's throw from the author's old 80-acre ranch, which was known to the horticultural world as Pelargonium Farm.

When it comes to pinks, anyone East or West has a choice of many varieties, but to me there is only one. It is Holmes Miller's Always. Mr. Miller classifies it with the pinks, but describes it as cream-white, flushed with a soft shrimp-pink, somewhat darker in the center. This is another of Miller's hybrids that the author has grown for over 10 years. With a little

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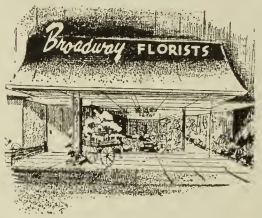

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fertilizing and plenty of water it will always be a beautiful double pink geranium for pots.

Up in the Northwest there is a single pink called Gertrude that is acclaimed as the best by nearly all laymen and professional growers alike, yet in the East the most popular pink is a semi-double called Penny or Penny Irene. There truly are so many good pinks through all the shades that it is difficult to go much farther in selections. Bill Schmidt's double salmon-apricot Lullaby comes in this class and to the author it rates right up there with Always. One could not go wrong in picking any of the Fiats, all of which are in the shrimp-pink range. One must remember that they are all hard to raise, but the effort is worthwhile if you succeed. Having raised hundreds of varieties in the past 15 years, it is indeed difficult to pick out the best.

There are four very excellent singles that I would like to recommend. The first two are Miller's: Dorothea Louise, an intense red with a small, very distinct white eye, and Bougainvillea, a purple-crimson with a white center. In a field bed of 150 Zonal geraniums these two always stand out and sell as well as any of their rivals.

Probably the most outstanding single of all Zonals is one called Mr. Wren. It is light red, with each petal very attractively tipped with white; at times there are white pencil stripes in the petals. This geranium was named for Dr. Wren, who found it around 1880 in an Oceanside, California, garden. Not until 1950, however, was it propagated and disseminated by Mr. Conn, a well-known Oceanside grower.

Berkeley Raspberry, a rich red with a slightly crimson tone, is the fourth outstanding single.

Miller has three outstanding doubles that are easy to grow. Of the three, the most vigorous is Welcome, a salmon-coral to salmon-apricot and a very free-flowering plant. It probably could have been classified with the pinks, but really is in a class by itself. The other two, both in the orange category, are soft enough in color to blend in any garden: Glory, orange with a small white center, and Halloween, apricot-orange with white center.

In listing orange geraniums one would be amiss if Maxine Kovaleski were not included. It is the best known brilliant orange ever brought out. Mrs. Howe, in her beautiful Rancho Santa Fe garden, has always had an excellent display of Kovaleski across the front of her adobe house. Mrs. Richardson, former owner of The Inn in Rancho Santa Fe, featured Kovaleski in all of The Inn's landscape work.

WHEN planted in the ground, Zonal geraniums do not seem too particular about soil so long as it is well drained. Actually, if the soil is too rich, geraniums are encouraged in leaf at the expense of flowers. This is very true of geraniums in Florida and many parts of the South where there are rich soils and much rain. Mrs. Hall, a geranium grower in Tampa, Florida, found that she had to use poor potting soil, have special drainage in all pots and cans, and had to use a non-nitrogenous fertilizer, since the rains there bring down nitrogen out of the air, thus forcing leaf growth. Always remember that geraniums should be kept on the dry side, but should never be allowed to dry out entirely.

Any good, balanced fertilizer, whether dry or liquid, is satisfactory, but none of it should be too heavy in nitrogen. Vigoro, a 6-10-4 combination, seems to work well if not overapplied.

Another fact often overlooked is that nearly all geraniums seem to prefer to be somewhat pot-bound and most certainly bloom better that way. One may have a wee bit of trouble maintaining adequate leaf growth and the right color, however, if the plants become too pot-bound.

The best way to keep up on geraniums and learn the latest news about them is to make out your check for $4 to the International Geranium Society. Send it along to me and I will see that you are enrolled. Their Quarterly magazine alone is well worth the price of membership. To encourage you to join, I will send you some valuable back copies of the magazine and you can later refund me the postage.

Again let me say that I will try to answer any questions regarding geraniums if you will send along a stamped self-addressed envelope to me at Route No. 4, Box 99A, Vista, California.

CORRECTION

Page 19 of the last issue (Dec. 1961-Jan. 1962), contains the following statement: "One, *Casuarina stricta,* appears among the best 65 trees for parkway planting on the list prepared by the California Association of Park administrators." The statement, literally correct, is a case of mistaken identity. The Park administrators intended to recommend *Casuarina equisitifolia.*

BOOK TOURS

Conducted by
Alice W. Heyneman

Flower Arrangements. By Norman DeKalb Edwards. Manzanita Press, Los Angeles, 1961. 210 pages. $12.00.

Our first impression and reaction to a new book, especially a book in the field of art, comes from the format, the cover and general lay-out.

Starting with the jacket, which the author himself designed, also with the placing and adjusting of the more than two hundred photographs of his own compositions throughout the book, Norman Edwards creates the necessary element of persuasion for further perusal. In this well planned and orderly book, each phase is grouped for easy study. Beginning with vases and containers, he shows a dozen types, with a dozen or more varieties for each type; several sections of stands, rocks, woods and figurines, all of which are used in the making of a great variety of arrangements; also essential information on practical mechanical devices on which to construct arrangements.

What is his style? Norman Edwards has come far away from the old Western idea of bouquet. He has, like many modern arrangers, been influenced by the simplicity and naturalness of the Chinese and Japanese arts. However, each of his arrangements becomes essentially his own because he is a creative artist, nor does he limit himself to flowers with vases alone, of which he uses a great variety. Many times he builds a composition with a large Oriental statue, stone or melon, and enhances it with a few finishing grasses in subordination.

The individual arrangements have perfection in design—proportion, contrast, scale, repetition and rhythm. To sum up the whole effect of the many photographs of arrangements in black and white we would say it has pictorial unity. And last, but not least, the four reproductions in color of paintings of arrangements by Edwards show the added enjoyment to be derived from color harmony in flower arrangements.

Reviewed by Margaret Preininger

Southern California produces more than one-third of all the roses sold in the United States.

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• BEGONIAS

THIS is the time to take begonia tubers out of storage to start them again, or to acquire new ones. Place the tubers on a flat of moistened leaf mold until the sprouts appear. When this happens, examine the bottom of the tuber for roots, and if there are any, begin to gradually fill in around the tuber with more leaf mold until it is completely buried. Keep barely moist until a good root system has developed and the top growth has reached a height of about five or six inches. At this time they may be planted in a good loose potting mix in a large pot. This is the one type of begonia where you may safely expect "the larger the pot, the larger the plant."

During the first part of this period, most of the work in the garden will be of the clean-up type—remove dead or dying leaves, see that the ground is clean, examine your rhizomes for rot and your canes for die-back, and if discovered, remove the affected parts.

Keep a close watch for new growth on all plants. When it appears, inspect your potting soil to determine whether it has broken down; if this has occurred, it is time to renew the soil and re-plant in a clean pot.

Spraying should be done to keep the new growth free of insects and disease, and control methods for slugs and snails should be used.

It might be wise to resume your feeding program at this time, if you have not kept it up during the cooler months, because growing plants need food.

From here on out, the old routine of keeping your plants clean, properly potted, fed, sprayed, and suitably watered, can go on until next fall or winter.

Margaret M. Lee

• ORCHIDS

A CYMBIDIUM ORCHID plant with arching sprays of flowers is a beautiful sight. It will remain in full bloom for at least two months. Naturally we like to place the orchids where they can be seen and admired, but there are a few things to keep in mind.

Orchids are not house plants. The conditions that orchids prefer are entirely different from those offered by the average home. Cymbidiums want free circulation of fresh air, filtered sun and cool temperatures. The flowers as well as the plants will suffer from the warm, dry air inside the house. If you do wish to display your blooming plant indoors, limit its stay to a few days. I bring mine onto the porch where they can be seen from the living room but where they still get the proper conditions. I have a lovely oncidium that makes a mauve cloud with its hundreds of tiny flowers. I would love to bring it into the house for all to admire but the little dear abhors cigarette smoke. One puff and all its flowers would fold in a day.

Do not leave the flowers on the plant too long. The health of the plant can be harmed if spikes are allowed to remain on until the flowers fold. It takes a lot of energy for a plant to maintain a spike. This energy is taken from the bulbs which also have to initiate new growths. Cut your cymbidium spikes after two or three weeks and use them in an arrangement for the house. The flowers will last for weeks if you re-cut the end of the stem every week.

Now is the time to think about repotting. For this information I am going to refer to "Handbook on American Cymbidium Culture," distributed by the Fred A. Stewart Company. Repotting is necessary when the plant has filled its container or when the compost has broken down. If a plant that is being repotted has a compact growth habit and does not have more than a few leafless bulbs, it is advisable just to wash off the old soil and shift the plant, without dividing, to a larger pot with fresh mix. With plants that have a number of dry, leafless bulbs, it is generally desirable to divide the plant and remove these bulbs. When dividing, observe how the plant is growing and try to make well-balanced plants of each division. A flowering size division requires at least three mature, leaved bulbs, so don't cut up the plants too small. Do not "overpot" unless the plant is a sturdy grower. Too large a pot often keeps the soil too wet, resulting in rotting roots and a sickly plant. One inch of clearance on a small plant, two on a large plant is about right.

Briefly these are the steps in repotting:

1. Enlarge the drain hole in a clay pot and cover with pieces of broken crock.
2. Thoroughly mix new compost and moisten.
3. Fill the bottom of the pot with new mix so that the base of the plant is about an inch from the rim of the pot.
4. Work the compost into the center of the plant and around the roots. Pack in the mix as tightly as possible.
5. Water to settle the compost and put in a moist, shaded spot.
6. Do not water the plant. Supply moisture by spraying its foliage and the outside of the pot.
7. When active root action shows, resume normal lighting, feeding and watering.

Roland Hoyt* Recommends

Elegant Ternstroemia

ELEGANCE is the key word in describing *Ternstroemia gymnanthera (T. japonica)*. Restrained in growth, with graceful conformation, its richly colored, glossy foliage adds a touch of elegance both to the garden and to flower arrangements. It is a shrub of almost classic purity, direct in its appeal, polished, rhythmic in the set of its distinctive leafage.

This slow-growing evergreen reaches 5-8 feet in height with an equal width. Pinching and light pruning will thicken the bush, which then becomes heavy with a kind of stodginess, the foliage alone the only aspect of beauty. The gardener who will give it a little further attention with the pruning shears finds it complaisant and willing, adaptable to line studies, handsome against a cool wall. It is long-lived and dependable.

*Member ASLA, author of *Ornamental Plants for Subtropical Regions.*

The dark green to bronze, two inch leaves, tinged with purple, become quite bronzy and shiny in full sun. The open form of the plant reveals curved reddish stalks and cream-colored, ¾ inch flowers, appearing in July and August. The flowers, inconspicuous but fragrant, scarcely open, but afford a kind of pattern in contrast to the dark back of leaves.

Ternstroemia is fairly adaptable, but performs best in an acid, loamy soil, with part shade in the hotter sections of the County. It has survived as much as 12° of frost at Kew Gardens in England. It is related to camellias and thrives with similar care, but will stand and deliver under surprisingly opposite site conditions and laugh at the wet face of the Colorado. *Eurya ochnacea,* long known as Cleyera, is a closely related species that should be given a serious try in cool coastal regions of California.

Ternstroemia has been grown for many years in Southern California, but not freely. It is a sleeper; surely its high quality and substantial production will in time become recognized. That's a job for the nurserymen.

Planted in depth, *Ternstroemia* forms a descending screen in the La Jolla garden of Mrs. John G. Clark, blends against background of nandina and bamboo.

There are as many potting mixtures as there are orchid growers. I will give you two that are in general use. The first is the compost used by the Stewart Company, a large commercial orchid range in Los Angeles. Many people are doing a good job of growing orchids under different conditions with this mix.

Use any unit of measure, such as a flower pot
2 parts fir bark
2 parts coarse, fresh oak leaves (leaves from other deciduous trees can also be used)
1 part fine, clay-free sand
2 parts German or Canadian peat
3 parts redwood fiber

The following mix is used quite a lot in this area. It is easy to make up in small amounts, and does not seem to break down as fast as others, so the plants do not need to be repotted as often. (However, since there is no food value in the bark a regular feeding program will have to be carried out.)

2 parts fir bark—medium to coarse grade
2 parts redwood bark—a combination of fiber and chunks
1 part sand

I omit the sand in this mix because I live in an area with high humidity and, therefore, do not need the water-retention qualities of the sand. At one time fertilizers such as hoof and horn, super-phosphate, etc. were incorporated into the potting mix. This practice is being dropped in favor of a regular feeding program that changes with the growth cycle of the plant.

Betty Newkirk
SD County Orchid Society

• FUCHSIAS

MIDWINTER is not usually a busy time for the fuchsia fancier, even in Southern California. But when the temperatures get up into the seventies and eighties, which is not uncommon here, extra care is needed. This is especially true when warm drying winds accompany high winter temperatures.

Almost before you think it possible, container plants are dangerously dry, and those in baskets may be lost, if not noticed soon enough. Many well-established old plants, and even trees, have been casualties of a too low ground water level during our current low rainfall. Occasional showers and foggy nights have lulled many of us into thinking our plants had enough moisture when we should be watering often. If they have been forgotten too long the ones in the ground would best be watered thoroughly and slowly with a soaker hose; and the moss baskets may need to be immersed in a tub of water, like a fern, for an hour or so.

One of the main essentials in fuchsia culture, of course, is proper pruning. The time for pruning depends upon location, with reference to when danger of frost is past. If too early (as some recommend in December or January), a real frost, not infrequent in lowland gardens, will hit hard the new growth stimulated by the pruning, and sometimes set the plant back for the whole season. In the San Diego area, late February is usually safely past frost damage, except in County cold spots.

The manner in which a fuchsia is pruned depends upon whether it is to be a bush, tree, basket, espalier, background, or border. Because fuchsias bloom only on new growth, the pruning is needed to stimulate that growth, as well as to shape the plant. And the timid gardener should remember to cut back at least two-thirds of the new growth, as a general rule, but always in line with the type mentioned above that the plant is to be. All long, straggly or stringy branches, as well as any showing signs of frosting.

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should be cut out, even though they may be green at the tip.

Basket plants should be pruned back to about two or three nodes, or around the basket edge, then pinched at tips as they grow to produce the proper shape. Bush or shrub fuchsias need cross, or crowding center growth cut out, then most new growth cut back to six or eight inches of the old stems, with an eye to their harmony with the place they occupy in your garden.

Standard, or tree, and espaliered types should not be cut or pinched back at the tips until they have reached the desired height. Then the side branches, or laterals may be trained to the desired design, also before pinching back. Like climbing roses they need much less pruning to achieve lovely and unusual effects.

Pruning time is a favorite opportunity for saving cuttings to propagate new plants for spring, though many prefer early spring growth. Only the most vigorous, healthy tip growth should be chosen, in four to six inch lengths. Watch carefully for the slightest indication of pests, weakness, or crooked growth tendencies. Press cuttings down an inch or so into flats of sharp moist sand, mixed with a little leaf mold, and place in a pleasant warm location protected from wind and radical changes of temperature, and in three weeks or so you'll have a treasure box of new Jewels-of-the-Shade all ready to transplant.

Morrison W. Doty
SD Fuchsia Society

• IRIS

PERHAPS you have overlooked a row of your prized iris, or there may have been a neglected patch in the garden when you bought the place. Don't we all at times overlook the things we love the most? Perhaps your intention was to get this mess out, to divide and re-set the rhizomes in well prepared soil, but alas, you think, it is now too late.

Looking at an old neglected iris row, misshapen and overgrown, it is hard to realize the great power of resilience and desire for life within those rhizomes. A friend who lives in the mountains once told me that after a long hard winter, iris are among the first plants to show life in that high country. Pushing a crust of snow up, and using it for a protection, the fans develop in spite of the cold.

The first step in renovating an old planting is a good deep watering. Next, get rid of the snails and slugs with a generous sprinkling of bait, and a dusting of chlordane, if there are ants and aphids.

Your personality determines the next step. Cleaning out each individual clump is a tedious task; you may want to do it in one fell swoop, or a few at a time, as you pass by to other tasks. Either way, get down on your knees with a rubber knee pad for protection. From the heart of each clump, by hand, remove all debris the wind may have brought in, then one by one peel off all the dead iris leaves, starting with the oldest. Pulling, or trying to remove several at once, might mean up-rooting the plant.

It is always a source of great satisfaction, when you have reached the end of the row, to rake up the mess, cart it away and look back at clean clumps with their fresh growth showing. True, you will now notice that many of the individual rhizomes are misshapen, some damaged by snails, the clumps overgrown and almost out of the ground, sitting in each others' laps, as it were.

My newest aid in getting the thinning job done in a hurry is a tool called an asparagus knife, the kind with a long handle. Since many of these old rhizomes are the spent bloom stalks of former years, and will never bloom again, they are only in the way. With a strong sharp knife, like a Scout knife, cut all around the bulbs to be discarded. A flip of the asparagus knife will then pop them out of the ground. You may want to thin out the row a little to even off the edges and remove damaged or spindly plants. In deciding which to remove, remember that usually the best rhizomes are on the outside of the clump. If reliable labels are still in place, unwanted varieties may now be discarded to leave as much space as possible for the remainder to bloom.

To feed these fast-growing iris, a generous sprinkling of sifted compost tends to fill in the holes left by the discarded plants. Then follow with a deep soaking and a dusting with snail bait and chlordane, if necessary. As a final step before bloom, a feeding with super-phosphate works wonders. With a dibbler that makes holes about three or four inches deep, make holes about every six inches along the outside of the row, fill each one with the super-phosphate and scratch the surface lightly. This gets nourishment to the roots in a hurry, and not only increases the bloom, but improves the color and form of every flower. Con-

tinue deep watering as long as the soil will take water without standing in the row.

At the height of bloom season is the ideal time to identify and label iris, to mark the varieties to be discarded, to decide which are really worth re-setting in the season ahead. You may want to get busy with the asparagus knife at once, and get rid of the spent bloomstalks. After all this loving care, you may even decide to keep the old row for another year and resolve that never again will you neglect your iris.

Helen D. Carswell

• ROSES

FROM NOW until the end of February is pruning time in the rose world of San Diego. In our area, climate indicates your particular pruning date. When the growth buds swell and protrude, it's time to get busy. Prune to a fat outside bud. This will create a vase-shaped "new" bush that will permit the sun to penetrate through the bush to the bud union. There are two good reasons for this procedure. First, you will have a well-mannered, shapely bush; second, the penetrating sun will encourage the growth of new canes from the bud union, to say nothing of letting circulating air and light help you battle the fungus diseases, rust and mildew. We normally expect rust and mildew later in the year, but remember that high humidity plus warm night temperatures are ideal for their development.

All of which leads up to a most important follow-up to your pruning. Carefully rake up debris from your rose beds. Either burn the debris or put it directly into your trash cans. When this has been accomplished, give your rose garden a thorough dormant spray—bushes and the ground. The most satisfactory dormant spray can be recommended by your nurseryman. This writer likes one put out by a California company, Destruxol Corp., called Calsul. Give the area a second spraying two weeks later. Be very sure to wet the soil thoroughly in order to smother any spores that are there.

There have been requests that rose varieties be discussed to assist readers in selections for their gardens. How I wish that that were possible, but it would take a volume. Climate has a definite effect on all varieties. Some like warm weather and do beautifully in the eastern sections of San Diego

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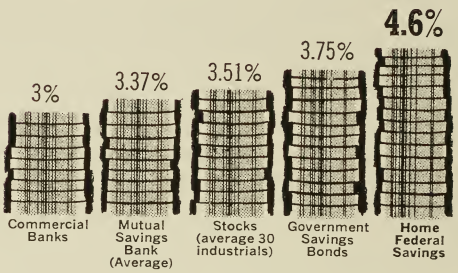

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City and County. Near the coast, the same rose will mildew heavily and the buds will not open. By the same token, a rose that does well in the beach areas will burn to a crisp where it gets hot. That is why one should consult his local nursery and visit gardens in his area. A membership in the San Diego Rose Society is the best answer to this and other problems. Members come from all points in the County, from Chula Vista to Encinitas, from the beaches to Poway and Alpine, so you're bound to find someone with growing conditions similar to your own.

Nettie Trott
SD Rose Society

• CAMELLIAS

CAMELLIA care at this season must be adapted to the blooming habit of your plants.

February, which is generally the height of the flowering period for most *Camellia japonicas* and *reticulatas,* is too early to use either a balanced fertilizer or one high in nitrogen, such as cottonseed meal. Nitrogen stimulates growth, and such renewed plant activity is detrimental to flower production. New growth seems to have priority on food reserves at the expense of flower size and quality. Some bud drop may be traced to new shoot growth.

In the case of container-grown plants, exceptions to the foregoing are made by some experienced growers. Some growers in this category fertilize lightly every month of the year. This practice is intended to offset loss of soil nutrients through the leaching action of the water that percolates through containers.

There are also growers who believe that flower size and quality may be improved by a light application of an 0-10-10 soluble fertilizer at this season. It is their contention that such a fertilizer, devoid of or containing only a trace of nitrogen, gives a boost to food reserves without stimulating new growth.

While the general practice is to withhold fertilizer until March or the end of the flowering season, it is not desirable to wait too long after the main crop of blooms. Nutrients should be available to plants when the first flush of growth gets underway. As a general rule, cottonseed meal and other organic products may be spread and watered in about two weeks earlier than one of the faster-acting products prepared especially for camellias by a fertilizer manufacturer.

While enjoying blooms in February, care should be exercised to maintain adequate soil moisture, to increase the humidity during dry periods by wetting down walks and the surrounding area, and by syringing off the foliage. Further disbudding may also be in order.

Garden sanitation is your best safeguard against the dreaded petal blight. Disease spores are wind borne and may reach your garden from some distant area; however, the disease can only get a foothold in your garden through a cycle of growth starting with an infected petal or bloom that falls to the ground and becomes imbedded in the warm, moist soil. Removal of all spent blooms will preclude a local point of infection the following season.

Clive N. Pillsbury
SD Camellia Society

• DAHLIAS

GARDENERS who want to grow dahlias from cuttings (slips) should get started now. Not only is it time for dahlia cuttings, but now is the ideal season to start other types of cuttings, such as chrysanthemums. In general, the system used for dahlias may be used effectively for other plants — even woody cuttings, both soft and hard.

Dahlia tubers that were stored in the fall, or that may have been recently obtained, must be waked up first. If this hasn't happened as a matter of course, nature should be given an assist. The tubers should be placed on a bed of peat moss, sand or vermiculite with the necks and crowns up. It is a good idea to have the crowns a little higher than the bed. To accomplish this, the bulk of the tuber can be snuggled into the bed material so that it is covered about half.

Flats or clay pots make good beds, and if pots are used, the tubers can be placed almost on end. Eight-inch pots will hold three or four medium-sized roots, or a half clump.

When the roots are bedded in they should be dampened and placed in a warm spot. Once dampened, the bedding material should be kept damp but not wet, and as warm naturally as possible. A glass house is good. Or a sunny window, warm spot in the garage, or any handy snug harbor.

Soon the gardener will be rewarded by the appearance of eyes on the crowns where the tuber has grown away from the stalk of the old plant. Then the eye becomes a sprout, and the sprout develops into a little dahlia plant, growing right out of the tuber.

While the sprouts are growing, get ready for the cutting process. Obtain a package of rooting hormone from the nursery, and have fresh rooting material handy. Sharp sand, prepared rooting mixtures, or a good potting mixture may be used with equal success.

Under warm conditions the little sprouts will boom up to three or four inches tall in two or three weeks. Three good sets of leaves are best.

With a sharp knife or razor blade take the cutting by slicing carefully between the node right next to the tuber and the lowest set of leaves. Trim away any excess stem of more than about an eighth of an inch. Carefully remove the bottom set of leaves from the cutting, and after dipping in water, the node, with leaves removed, should be dipped in the rooting hormone, shaken slightly to remove the excess, and then placed in the rooting medium about an inch deep — just enough to get a good seating for the node.

When all cuttings are in the flat or pot, the latter should be wet down and placed in a warm spot. Warmth is essential to make the roots form around the cutting node, but direct exposure to sun heat will make the cuttings wilt. A constant temperature of 65-75° is said to be ideal, but many gardeners have success by depending on daytime warming alone.

Again the rooting medium should be kept only damp. Over-watering will encourage damping off.

Within two or three weeks the cuttings should have a good root system and may be placed in 4-inch pots until planting out time—the latter part of March or during April. (If you don't want cuttings, just wait until then and plant the entire dahlia root.)

After the first cutting is taken from each root, or each eye, two sprouts will appear from the node left on the tuber. These will develop into little plants for cutting in the same manner. Just keep up the moisture and warmth. And after the next two cuttings, four will appear, and so on, until the virility of the root is exhausted, and the gardener is supplied with all the plants from that variety that he wants.

Larry Sisk
SD County Dahlia Society

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STAPELIADS

Weird and Wonderful - and easy to grow

By Cleoves Hardin

Drawing by Dorothy M. Landon

Stapelia gigantea

THE Stapelia tribe—20 genera and 400 species—are the most curious of all succulent plants. They are stem succulents branching from the base to form tiny tufted plants from an inch or two in height to plants three feet or more, but the most commonly known varieties usually grow to no more than a foot. Their smooth succulent stems vary from circular to many angled—mostly four to six angles.

Even more intriguing than the plants are the unique flowers. They generally are in the form of a five pointed star, hence the nickname Star Cactus, but they may also be closed in the form of a saucer or bell. Blooms range from less than one inch in diameter to 18 inches. More interesting than either size or shape are the strange colors and distasteful odor. Most of them look and smell like bits of rotting meat, accounting for another common name, Carrion Flower.

The purpose of this curious combination of color and smell is to attract the blowfly for pollination. The pollen grains are in the form of waxy bodies attached in pairs with clamplike organs, called pollen carriers. As the insects settle on the blossoms, their legs become entrapped in the fine, animal-like hairs, and the waxy pollen grains become attached to their snouts, legs and bodies as they struggle to free themselves. From one flower to another they go, carrying these masses and continuing the process of pollination and cross-pollination until we have the many natural hybrids seen today.

The best known of the Stapeliads is the genus Stapelia, consisting of about one hundred species and varieties. Most of them are native to South Africa.

Stapelias are small, clustering plants with soft, erect, four-angled stems. The large, flat, star-shaped flowers are similar in color and marking to starfish, hence their popular name, Starfish Flower. Most collections include the common *S. variegata* whose two-inch yellow flowers, heavily spotted with maroon, and stubby stems have won it the nickname, Toad Cactus. Others are *S. berlines,* the black Starfish; *S. hirsuta,* the Hairy Starfish; the nearly scentless Bearded Starfish Flower, *S. pulvinata,* whose flowers are fringed with reddish-brown hairs; and *S. gettleffi,* with six-inch flowers of creamy yellow banded with purple stripes. The most spectacular of all are the giants: *S. nobilis,* with pale, yellow-red flowers a foot across, and *S. gigantea,* the Giant Starfish, with flowers sometimes reaching eighteen inches in diameter.

A closely related genus, Caralluma, contains one hundred or more species. The plants resemble Stapelias but have smaller flowers borne in greater profusion. Caralluma has a wide range including North and South Africa and the southwestern shores of Spain. *C. europaea* and *C. burchardi* are admired for their irregular stems and clusters of one-half-inch flowers. Flowers of burchardi are covered with snowy white, vibrating hairs, a feature even more notable in *C. lutea,* whose three-inch canary yellow flowers are continuously trembling with a fringe of red hair.

The South African genus Hoodia, the largest of the Stapeliads, is often three feet or more in height with strange saucer-shaped blossoms. *H. gordoni* is a free flowering plant with erect, spiny stems and four-inch, flesh-colored flowers. *H. baini* is similar, but with pink flowers tinged with yellow. *H. macrantha* is a giant with three foot stems and bright purple flowers sometimes reaching eight inches in diameter.

Besides those mentioned there are many, many more, but most are either difficult to grow or not obtainable. The chief difficulty in growing Stapeliads is in judging their moisture requirements. Water moderately in the summer and just enough in winter to keep them plump and healthy looking. They are very susceptible to rot, especially black spotting rot, and to cold weather. They require a fairly rich, porous soil and filtered sunlight.

Old clumps should be divided often so that they will not rot in the center; new stems can be rooted in sand that is kept on the dry side until roots form. Stapeliads are also easy to raise from seed; in fact one can hardly discourage seedlings in an open bed. These are easy succulents to grow and handle and are highly recommended for the beginner's garden.

NATURE'S NOOK

. . . Sidelights
on the world of plants

Hydrangeas

By Donald Betts

IN THE SPRING a young man's fancy turns to love, 'tis said. And in the Southern California spring a gardener's fancy turns to hydrangeas. At this enchanting time of year these plants begin to sprout their great round flower-clusters, which in due course float among the lush green leaves like pink and rose and blue and purple balloons. Inevitably, too, the question about their coloring bobs up among garden-minded people. Although the matter of hydrangea coloring is clearly understood by many folk, for the sake of those who are a bit hazy on the details, let's go into it a bit.

I am referring to forms of one species only of hydrangea, *Hydrangea macrophylla,* which is widely called hortensia. This was originally a Japanese shrub, and has been cultivated in that garden-clever land for many centuries. No doubt the Japanese gardeners long ago learned to change the color of their hydrangea's flowers by simple home-spun methods, but in these modern technical times we might as well get technical, too, about hydrangeas.

In the first place, what causes the change of color in the flowers is the acidity of the soil in which they are planted. In high school chemistry, I remember, we could tell if a solution was acid if it changed the color of litmus paper. And by the same token, if you increase the acidity of the soil around a hydrangea plant bearing pink or rose-colored flowers, you will change the color of the blossoms to blue or purple respectively. This is done most effectively by treating the soil at weekly intervals during the blooming season with aluminum sulphate dissolved in water at the rate of one pound to five gallons. On the other hand, if you have blue or purple flowers and want pink or rose-colored ones, you must sprinkle hydrated lime around your plant and water it in thoroughly, to reduce the acidity of the soil, and so turn the flowers to pink or rose.

To dig a little deeper into the chemistry of the matter, however, it is not basically the acidity of the soil that directly affects the color of our hydrangea blossoms. It is the presence or absence in the plants of the chemical element aluminum. Aluminum present in the plant causes the flowers to be blue. Lack of it causes them to be pink or rose. When the soil is on the acid side, aluminum in the soil is not locked up into aluminum compounds and so is free to be absorbed into the roots of the plant and carried up into the flowers. But when the soil loses its acidity and becomes neutral in reaction, as the chemists say, then the aluminum combines readily with other elements in the soil and is "locked up." It is no longer free to be absorbed into the roots of the plants. There is a consequent lowering of the amount of aluminum present in the flowers. And so they revert to their pink or rose-colored condition.

ONE PLANT scientist, in a somewhat playful mood perhaps, one day about eighteen years ago, divided the root system of an innocent and perfectly harmless hydrangea plant, and was mean enough to put part of the roots in acid soil and the other part in a neutral soil. As a result, those flowers of the plant connected with the roots in the neutral soil became pink, which must have been very confusing to the poor plant.

In much the same way, when a young man's fancy turns to love in spring, a playful lady-scientist will sometimes experiment by discouraging the poor fellow completely one moment and encouraging him outrageously the next. This certainly leads to as utter a confusion in the male animal as the mixing of flower colors must lead to in the hydrangea plant.

But of course in each case the aims of love or science are successfully advanced, to say the least.

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Potpourri

. . . people, places, products in the news

• New Burnham Building

An effective combination of modern architecture and skilled landscape design make John Burnham & Co.'s new home at Sixth and Cedar an attractive landmark in downtown San Diego. Each of the two large entrance courts, the only openings in the exterior brick wall, enclose as much space as a small house and are accented by expressive landscaping in recessed planters.

Roland Hoyt, landscape architect, used Victorian Box Trees (*Pittosporum undulatum*) for the delicate line effect of the stems, and has included the more distinctive Catalina Ironwood Tree (*Lyonothamnus floribundus*) for a fernlike effect. The Ironwood Tree bark is unique in that it changes colors with the changing seasons. Japanesque gray Corokia bushes, which lend color to the courtyards without extra foliage, were also used.

The building, designed by Frank L. Hope & Associates, architects, for the local mortgage, real estate, property management, and insurance firm, is notable for simplicity of design concept and crisp attention to detail.

Burnham Building: each of two courtyards is as large as a small house.

• Helen Carswell Honored

Helen D. Carswell of Sepulveda, California, has been nominated the 1961 Outstanding Consulting Rosarian of the American Rose Society Pacific Southwest District (Southern California, Arizona and New Mexico). This is the first time the award has been made in Southern California.

Mrs. Carswell is a past District Director of the ARS, an accredited rose judge and a vice-president of San Fernando Valley Rose Society. She is a member of the San Diego Floral Association.

• Buena Vista Lagoon

Nature Conservancy has taken title to 80 acres of Buena Vista Lagoon, the 200-acre, fresh water lagoon between Carlsbad and Oceanside. Ultimate aim of the program is to reserve the entire lagoon as a natural area for wild-life. The Buena Vista Lagoon Association is negotiating for acquisition of the remaining 125 acres.

• Blooming Balboa Park

February

Prado—Camellias, Cinerarias
House of Hospitality—Camellias, Pansies
Organ—Bird-of-Paradise
Mall—Alyssum
Formal—Calendula
Palisades—Calendula, Aloes

March

Prado—Camellias, Cinerarias
House of Hospitality—Camellias
Mall—Alyssum
Formal—Calendula
Palisades—Calendula

• Poinsettia Sweepstakes

Results of the 1961 running of the annual Poinsettia Sweepstakes were announced in January by the sponsoring San Diego Junior Chamber of Commerce.

Mr. and Mrs. Alfred E. Fernandes, 4106 Merritt Blvd., La Mesa, won the plaque for the tallest plant. Their winning entry measured 21 feet.

The largest bloom award went to Mrs. F. H. Belloff, 2111 Mendocino Blvd., Ocean Beach, for a flower 16 inches in diameter.

Mrs. Forest F. Faust, 9420 Lavell Road, La Mesa, won the prize in the most-prolific-plant category.

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